

# 방사선치료에 실패한 비인강암에서의 구제수술의 유용성

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## The Role of Salvage Surgery in the Treatment of Irradiation-Failed Nasopharyngeal Carcinoma

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### ABSTRACT

**Background and Objectives** : When nasopharyngeal carcinomas recur after radiotherapy, it becomes difficult to select further treatment modality. We reviewed surgical results of irradiation-failed nasopharyngeal carcinoma patients and investigated the role of salvage surgery. **Materials and Methods** : Surgical results of 10 cases of nasopharyngeal carcinoma were investigated. All of them had a recurrent or residual nasopharyngeal carcinoma after radiation therapy. The medical records of these patients were reviewed retrospectively and the mean survival time was calculated by Kaplan-Meier method. **Results** : The mean survival time of the irradiation-failed nasopharyngeal carcinoma patients was 21.8 months. The survival times of early staged irradiation-failed tumor were longer than that of the tumor in the advance stage. Among 3 patients whose recurrent tumor stages were T1, two patients had the negative resection margin and they lived without the disease. However, none of the patients whose recurrent tumor stages were beyond T2 (n = 7) had the negative resection margin and lived without the disease. **Conclusion** : Surgical treatment was an useful treatment modality for improving the survival time of early staged irradiation-failed nasopharyngeal carcinomas. (Korean J Otolaryngol 2001;44:423-6)

**KEY WORDS** : Nasopharyngeal carcinoma · Recurrent cancer · Surgical resection.

본 연구는 방사선치료에 실패한 비인강암 환자의 구제수술의 유용성을 알아보기 위하여 1992년 1월부터 1997년 12월까지 본 병원에서 수술을 받은 10명의 환자를 대상으로 하였다. 이 중 3명은 T1, 7명은 T2 이상의 병기였다. 수술 후 병기 재발률은 10%로 나타났다. T1 병기의 환자 3명 중 2명은 음성 절제술을 받았고, T2 이상의 병기 환자 7명 중 1명은 음성 절제술을 받았다. 평균 생존 기간은 21.8개월이었다. T1 병기의 환자 3명 중 2명은 음성 절제술을 받았고, T2 이상의 병기 환자 7명 중 1명은 음성 절제술을 받았다. 평균 생존 기간은 21.8개월이었다. T1 병기의 환자 3명 중 2명은 음성 절제술을 받았고, T2 이상의 병기 환자 7명 중 1명은 음성 절제술을 받았다. 평균 생존 기간은 21.8개월이었다.

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American Joint Committee on Cancer(AJCC, 1997)

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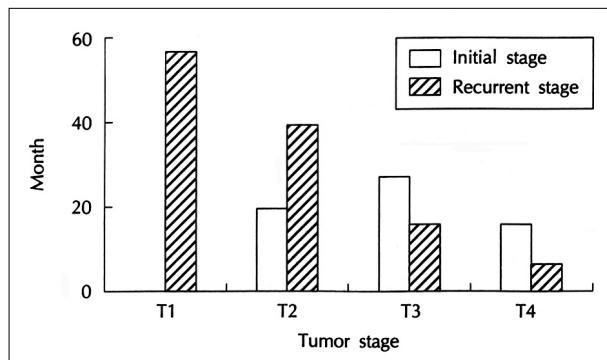
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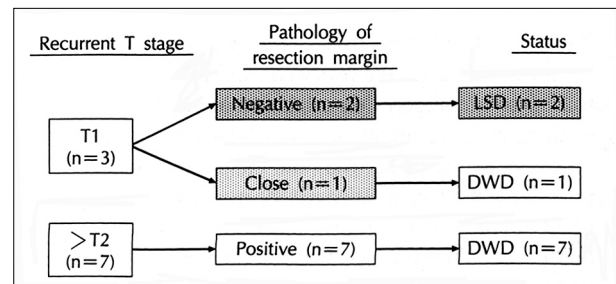
**Table 1.** Clinical characteristics of recurrent nasopharyngeal carcinoma treated by surgery

Patient No./ Sex/Age. y	Previous RT No. of course/cGy	Pathology	Initial stage (TNM)	Recurrent stage (rTNM)	Approach	Resection margin	Follow-up, mo/Status
1/M/52	1/7020	UD	400	200	ITFA	Pos.	39/DWD
2/M/42	2/10800	UD	320	100	ITFA	Neg.	41/LSD
3/M/46	1/7020	UD	300	100	ITFA	Close.	30/DWD
4/M/64	1/7000	NK	320	100	ITFA	Neg.	30/LSD
5/M/33	1/7020	UD	400	400	ITFA	Pos.	6/DWD
6/M/61	2/10020	NK	300	420	MSA	Pos.	9/DWD
7/F/66	1/6800	KN	400	430	ITFA	Pos.	3/DWD
8/M/54	1/7020	KN	200	320	FTL	Pos.	30/DWD
9/M/45	1/7020	UD	210	400	ITFA	Pos.	10/DWD
10/M/54	1/6980	UD	220	300	MSA	Pos.	19/DWD

UD : undifferentiated carcinoma, NK : nonkeratinizing carcinoma, KN : keratinizing carcinoma, ITFA : infratemporal fossa approach, FTL : facial translocation, MSA : maxillary swing approach, DWD : die with disease, LSD : live without disease, Neg. : negative, Pos. : positive



**Fig. 1.** Mean survival time according to the initial and recurrent T stage. The survival times of early staged irradiation-failed tumor were longer than that of the advanced staged tumor. But the initial stage has no relationship with survival time.

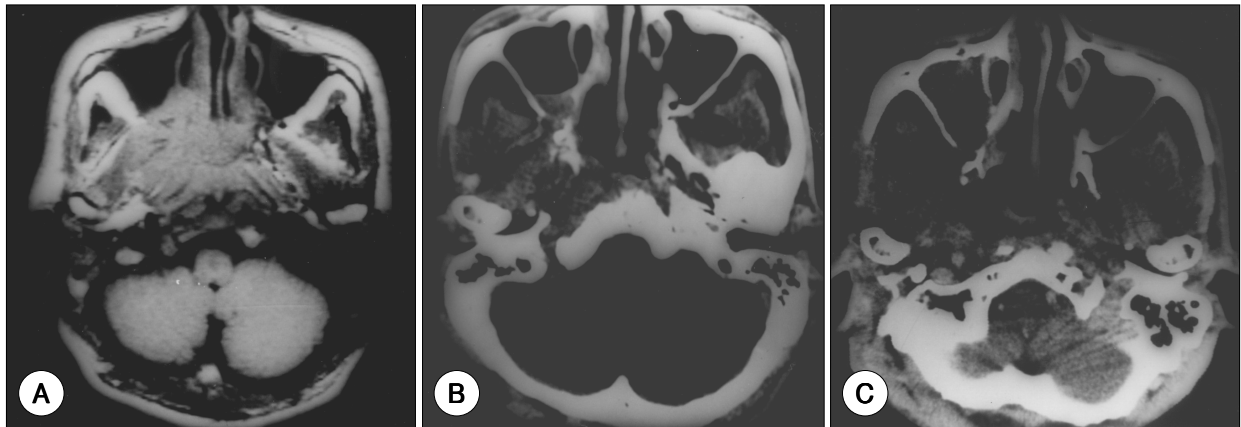


**Fig. 2.** Status of patients according to the surgical resection margin. Among 3 patients whose recurrent tumor stages were T1, two patients had negative resection margin and they were alive without disease. However none of the patients whose recurrent tumor stages were more than T2 (n = 7) had negative resection margin and were alive without disease (LSD : alive without disease, DWD : dead with disease).

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C (Infra - temporal fossa approach type C) 7 , (Ma - xillary swing approach) 2 , (Facial transl - ocation) 1  
Table 1  
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(Fig. 1).  
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가 T2 7  
(Fig. 2).

2 , House - Brackmann grade II  
가 1 , 가 2



**Fig. 3.** Preoperative magnetic resonance images (A), computed tomogram in 2 months after radiation therapy (B) and 24 months after operation (C) of patients No. 4. The tumor was removed via infratemporal fossa approach and no remained tumor was noted in postoperative computed tomogram.

**Table 2.** Complications after surgical resection

Approach	No.	Permanent facial palsy	Trismus	Deaf	Hemorrhage
ITFA	7	1	2	2	1
MSA	2	0	2	0	0
FTL	1	0	0	0	0

ITFA : infratemporal fossa approach, MSA : maxillary swing approach, FTL : facial translocation

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Positron emission tomography(PET)<sup>17)</sup>  
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